# POOM User Manual

By
Digital Photogrammetric Research Group

Document Version 1.0

Department of Geomatics Engineering
University of Calgary
2500 University Drive NW
Calgary, Alberta, T2N 1N4, Canada
Tel: (403) 220-7105; Fax: (403) 284-1980
Email: habib@geomatics.ucalgary.ca

January 2006

**Document History**

| Version | Date | Software Version | Description |
|---|---|---|---|
| 1.0 | Jan 26, 06 | *Poom* 1.0 | Original version. |

## Purpose

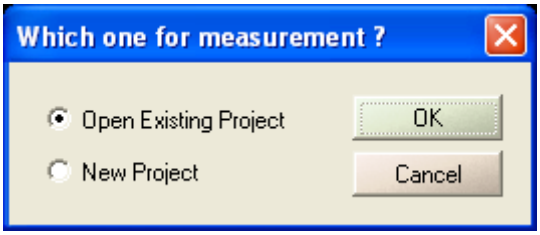
The purpose of *Poom* is to measure the coordinates of point targets on a single image or a stereo pair, such as image coordinates of ground control points or tie points. All measurements would be saved by the user in pixel coordinates. Pixel coordinates could be converted to image coordinates.

## Installation of *Poom*

*Poom* requires no installation procedure; just a direct copy of the executable. The file can be directly copied onto the hard drive or server of the computer.

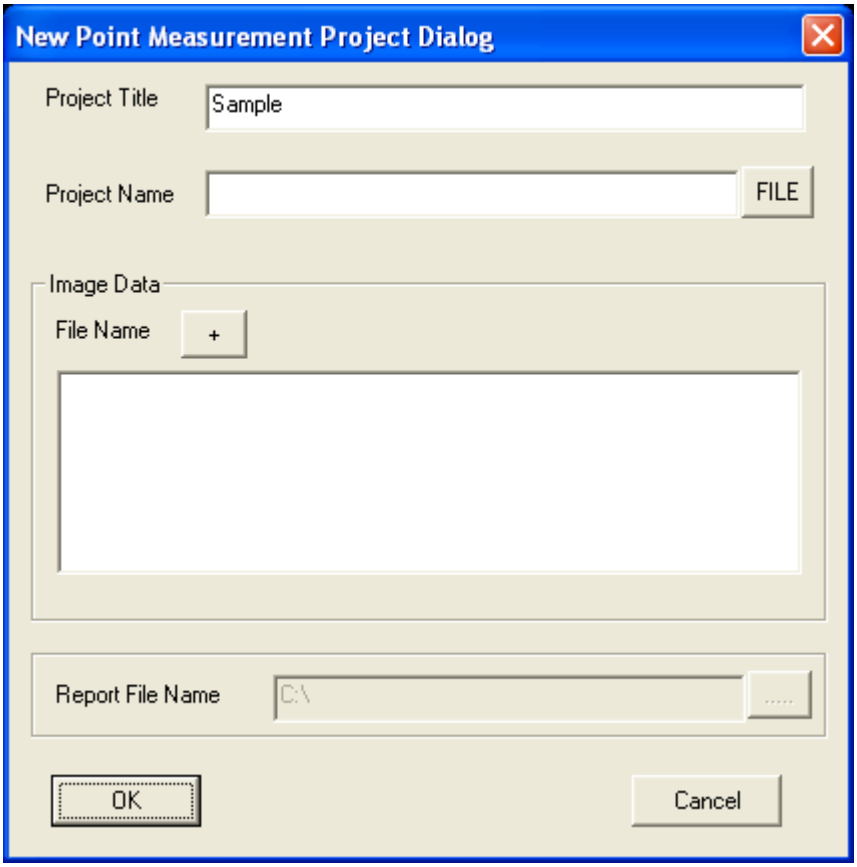
## Getting Started

To start Poom, double-click the poom_fastest.exe file. First, the user must create or open a project file before making measurements. Click on "Open Project" icon on the right side of the program. Then the following will pop up.

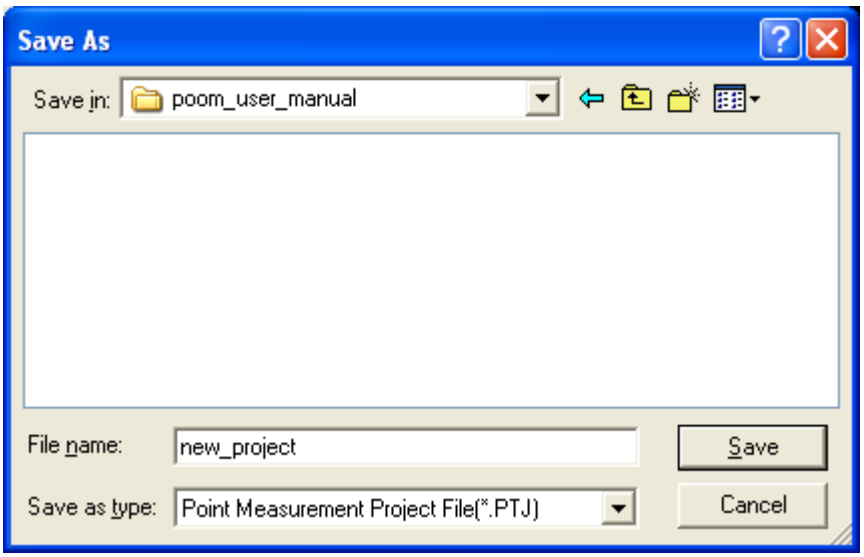



If starting a new project, select "New Project" and click the "OK" button. If trying to open a project, select "Open Existing Project", and click the "OK" button. Then another prompt window will open and ask for the project file. Select the project file and click "OK".

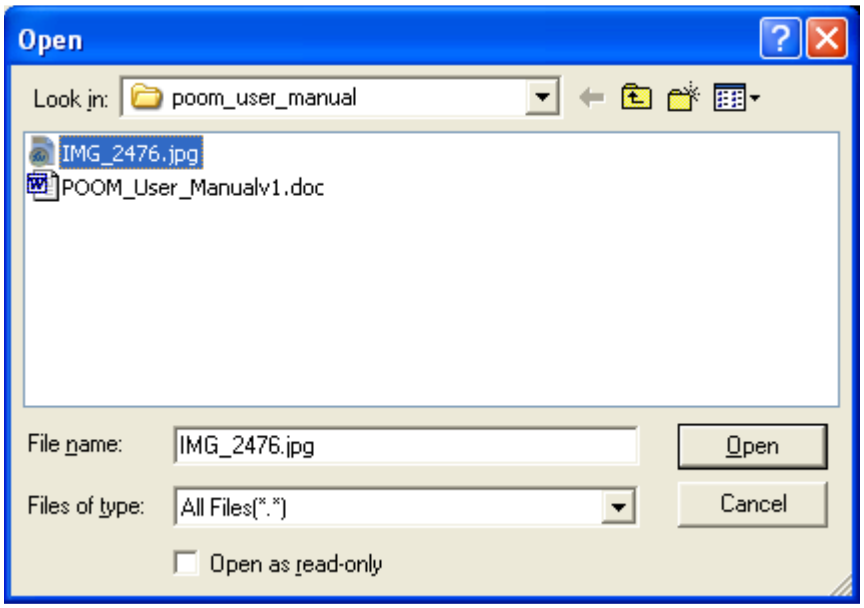
The following prompt will open "New Project" was chosen.




Click on the "FILE" button to create a new project file, select a desire path from the pull down menu and save the file.

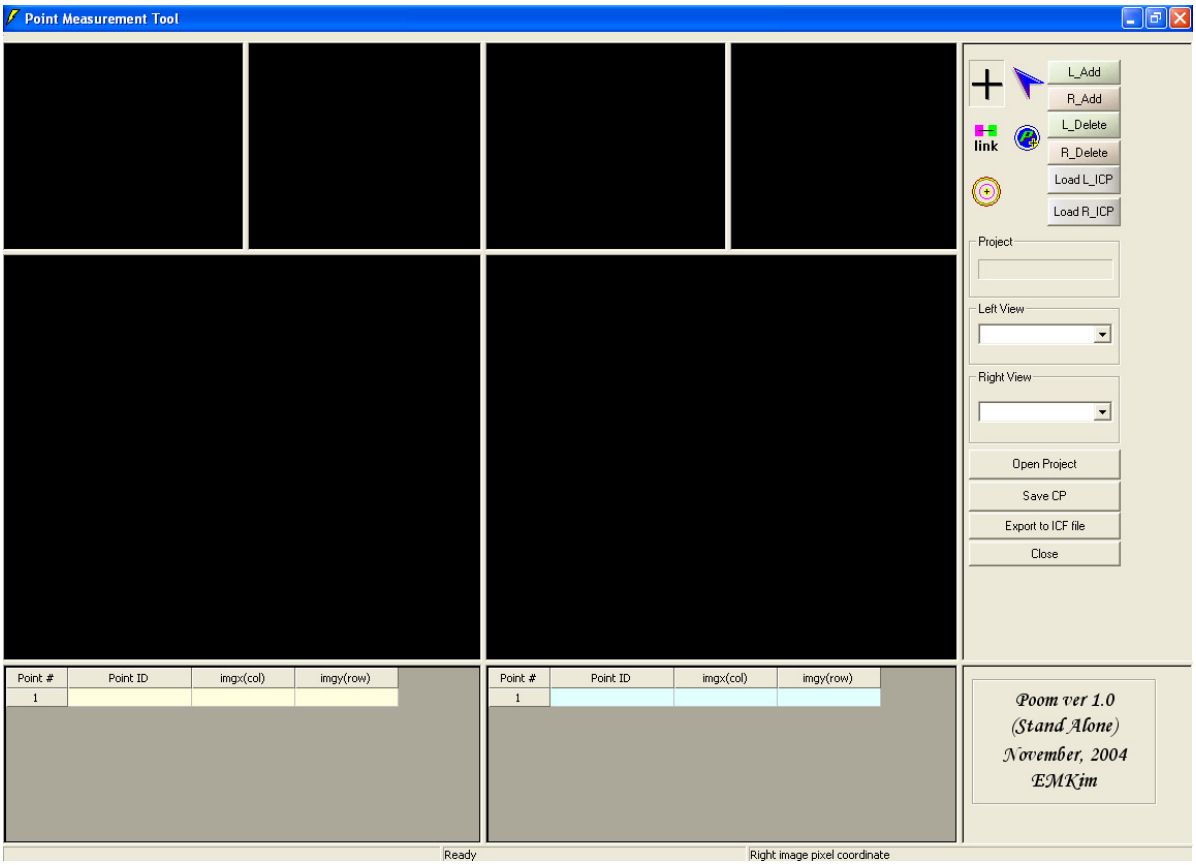



After saving the file, click on the "+" button from "New Point Measurement Project Dialog". *Poom* will then ask the user for the images that are in this project. Change the path if necessary, from the pull down menu, and select the images. Use the ctrl key to select multiple images. *Poom* supports tiff, jpge and bitmap formats.

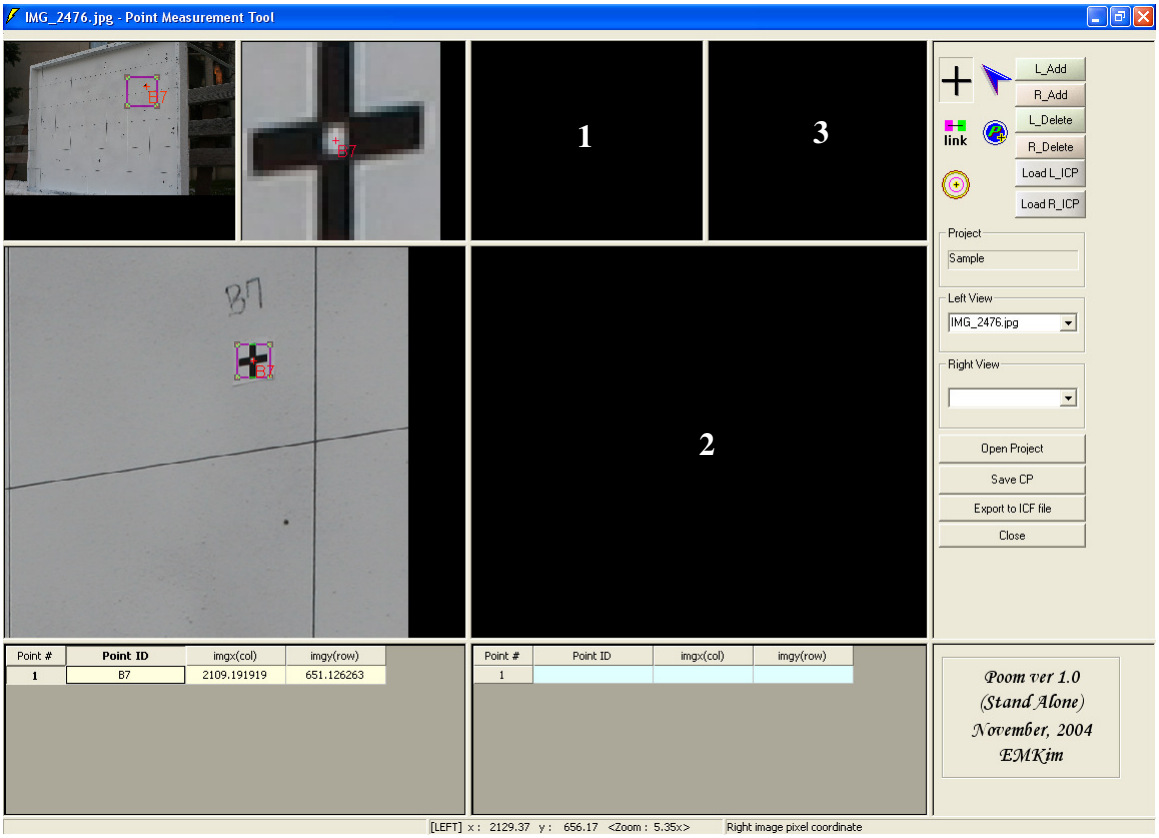



## Working with *Poom*

After the project file is opened in *Poom*, the user would be able to select the specific images in the "Left View" and "Right View" pull down menus.



After the image is selected, the full extent of the image would display in area "1". The purple box in area "1" defines the view of area "2". Area 3 is the zoom in view of the purple box in area "2". The user would be able to move and resize the purple boxes in both area "2" and "3". In order to zoom in, just reduce the size of the purple box, and vise versa.

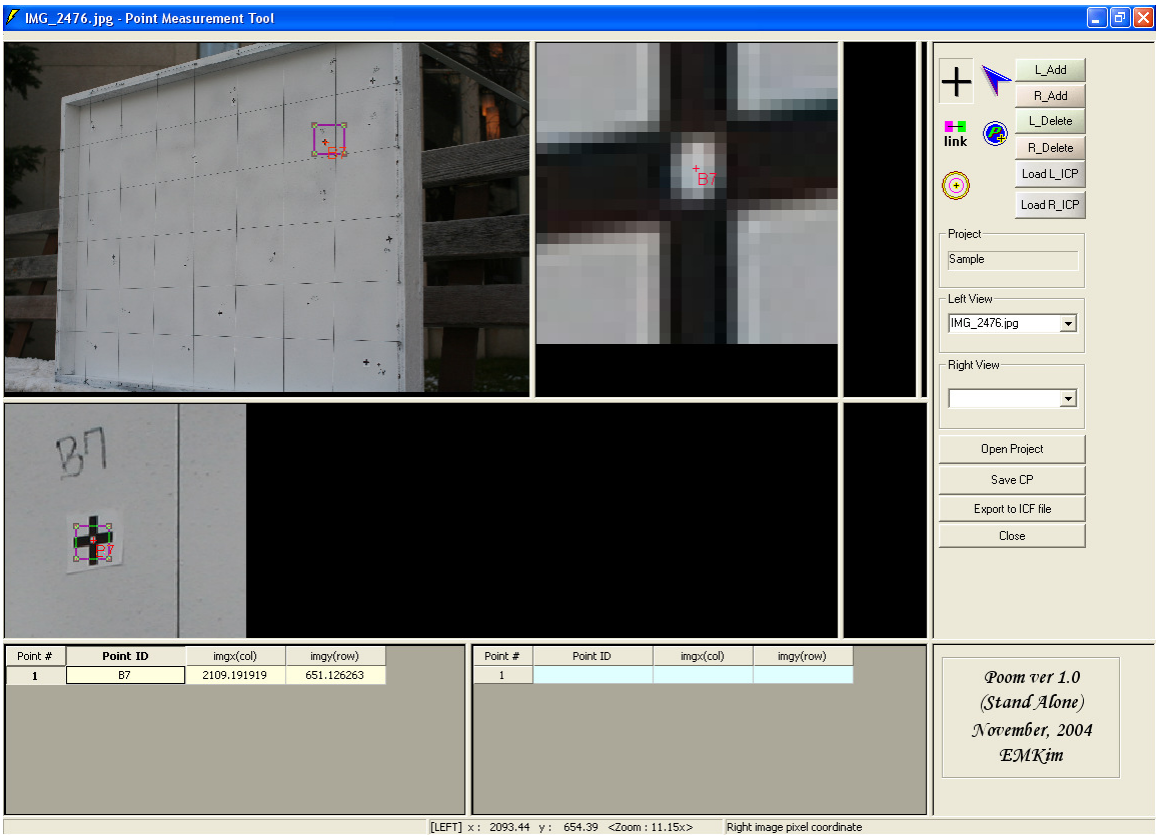



To collect targeted points, the user must add columns by using either "L_Add" or "R_Add" button. Then one must type in the Point ID before selecting the targeted point from area "3". When the user made a bad observation, highlight the point ID from the columns and reselect the point in area "3". If the point ID is incorrect, it is recommended to fix the point ID and remake the observation.

To remove the observation, one may use either "L_Delete" or "R_Delete" button.

To save the observations for both left and right views, the user must manually click on "Save CP" button. The file named "imagename_ICP.dat" will be created. This file will contain the exact values as displayed in the columns. One must save the measurements before selecting another image, or loading in previous observations.

In order to load the saved observations, one may click on "Load L_ICF" or "Load R_ICF" button.




The areas may be resized by moving the horizontal and vertical bars for personal preferences.

The measurements are in pixel coordinates with the origin at the top left hand corner and the positive y-axis pointing down the image and positive x-axis pointing towards the right. The user can convert pixel coordinates into millimeter units relative to a Cartesian coordinate system where the origin is in the center of the image by using the "Export to ICF file" button. *Poom* will prompt the user for the pixel size of the camera; two files would be created and named "imagename_MSAT.prj" and "imagename.icf". The first file contains information about the camera, which includes the number of pixels in x and y direction, pixel size that the user entered, as well as the image ID. The second file has the following format:

Path and name of the image  Point ID  X Coord [mm]  Y Coord [mm]  matrix